

**POINT PRECIPITATION FREQUENCY ESTIMATES**  
**INDIANAPOLIS WSFO AP Station ID: 12-4259**  
**Location name: Indianapolis, Indiana, USA**  
**Latitude: 39.7317°, Longitude: -86.2789°**  
**Elevation: 790 ft**

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)1  
 NOAA Atlas 14

Average recurrence interval (years)	100%	50%	20%	10%	25%	50%
Duration (minutes)						
5-min	0.384(0.346-0.427)	0.457(0.412-0.508)	0.547(0.493-0.608)	0.618(0.554-0.686)	0.709(0.631-0.788)	0.782(0.691-0.871)
5 Low	0.346	0.412	0.493	0.554	0.631	0.691
5 Average	0.384	0.457	0.547	0.618	0.709	0.782
5 High	0.427	0.508	0.608	0.686	0.788	0.871
5 Low	4.15	4.94	5.92	6.65	7.57	8.29
5 Average	4.61	5.48	6.56	7.42	8.51	9.38
5 High	5.12	6.10	7.30	8.23	9.46	10.45
10-min	0.596(0.537-0.664)	0.713(0.643-0.792)	0.850(0.766-0.945)	0.954(0.855-1.06)	1.09(0.966-1.21)	1.19(1.05-1.32)
10 Low	0.537	0.643	0.766	0.855	0.966	1.050
10 Average	0.596	0.713	0.850	0.954	1.090	1.190
10 High	0.664	0.792	0.945	1.060	1.210	1.320
10 Low	3.22	3.86	4.60	5.13	5.80	6.30
10 Average	3.58	4.28	5.10	5.72	6.54	7.14
10 High	3.98	4.75	5.67	6.36	7.26	7.92
15-min	0.731(0.659-0.813)	0.872(0.787-0.969)	1.04(0.940-1.16)	1.17(1.05-1.30)	1.34(1.19-1.49)	1.47(1.30-1.63)
15 Low	0.659	0.787	0.940	1.050	1.190	1.300
15 Average	0.731	0.872	1.040	1.170	1.340	1.470
15 High	0.813	0.969	1.160	1.300	1.490	1.630
15 Low	2.64	3.88	4.64	5.20	5.96	6.52

15 Average	10.54	15.50	18.56	20.80	23.84	26.08
15 High	42.18	62.02	74.24	83.20	95.36	104.32
30-min	0.967(0.871-1.08)	1.17(1.05-1.30)	1.43(1.29-1.59)	1.63(1.46-1.81)	1.89(1.69-2.10)	2.10(1.85-2.34)
30 Low	0.871	1.050	1.290	2.460	1.690	1.850
30 Average	0.967	1.170	1.430	1.630	1.890	2.100
30 High	1.080	1.300	1.590	1.810	2.100	2.340
30 Low	1.74	2.10	2.58	4.92	3.38	3.70
30 Average	1.93	2.34	2.86	3.26	3.78	4.20
30 High	2.16	2.60	3.18	3.62	4.20	4.68
60-min	1.18(1.06-1.31)	1.43(1.29-1.59)	1.79(1.62-1.99)	2.07(1.86-2.30)	2.46(2.19-2.73)	2.76(2.44-3.08)
60 Low	1.06	1.29	1.62	1.86	2.19	2.44
60 Average*	1.18	1.43	1.79	2.07	2.46	2.76
60 High	1.31	1.59	1.99	2.30	2.73	3.08
60 Low	1.06	1.29	1.62	1.86	2.19	2.44
60 Average*	1.18	1.43	1.79	2.07	2.46	2.76
60 High	1.31	1.59	1.99	2.30	2.73	3.08

1 Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Number of exceedances (N) is the number of partial duration series (PDS) estimates. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) are not checked against probable maximum precipitation (PMP) estimates and may be high for more information.

28.48	30.88	33.92	36.32
113.92	123.52	135.68	145.28
2.30(2.01-2.57)	2.51(2.17-2.81)	2.78(2.37-3.14)	2.99(2.52-3.41)
2.010	2.170	2.370	2.520
2.300	2.510	2.780	2.990
2.570	2.810	3.140	3.410
4.02	4.34	4.74	5.04
4.60	5.02	5.56	5.98
5.14	5.62	6.28	6.82
3.08(2.69-3.43)	3.40(2.95-3.81)	3.85(3.28-4.35)	4.20(3.54-4.78)
2.69	2.95	3.28	3.54
3.08	3.40	3.85	4.20
3.43	3.81	4.35	4.78
2.69	2.95	3.28	3.54
3.08	3.40	3.85	4.20
3.43	3.81	4.35	4.78

Values in parenthesis are PF estimates at lower and upper bounds of the 90% interval) will be greater than the upper bound (or less than the lower bound) is greater than currently valid PMP values. Please refer to NOAA Atlas 14 document

	100	200	500	1000
0.852(0.746-0.951)	0.925(0.802-1.04)	1.02(0.873-1.16)	1.10(0.923-1.25)	
0.746	0.802	0.873	0.923	
0.852	0.925	1.020	1.100	
0.951	1.040	1.160	1.250	
8.95	9.62	10.48	11.08	
10.22	11.10	12.24	13.20	
11.41	12.48	13.92	15.00	
1.28(1.12-1.43)	1.38(1.20-1.55)	1.51(1.28-1.70)	1.60(1.34-1.82)	
1.120	1.200	1.280	1.340	
1.280	1.380	1.510	1.600	
1.430	1.550	1.700	1.820	
6.72	7.20	7.68	8.04	
7.68	8.28	9.06	9.60	
8.58	9.30	10.20	10.92	
1.59(1.40-1.78)	1.72(1.49-1.93)	1.88(1.60-2.12)	2.00(1.68-2.27)	
1.400	1.490	1.600	2.680	
1.590	1.720	1.880	2.000	
1.780	1.930	2.120	2.270	
7.12	7.72	8.48	9.08	

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Average recurrence interval (Years)	1	2	5	10	25	50	100*	200	500	1000
Probability	100%	50%	20%	10%	4.0%	2.0%	1.0%	0.5%	0.2%	0.1%
Duration (minutes in/hr)										
5 Low	4.15	4.94	5.92	6.65	7.57	8.29	8.95	9.62	10.48	11.08
5 Average	4.61	5.48	6.56	7.42	8.51	9.38	10.22	11.10	12.24	13.20
5 High	5.12	6.10	7.30	8.23	9.46	10.45	11.41	12.48	13.92	15.00
10 Low	3.22	3.86	4.60	5.13	5.80	6.30	6.72	7.20	7.68	8.04
10 Average	3.58	4.28	5.10	5.72	6.54	7.14	7.68	8.28	9.06	9.60
10 High	3.98	4.75	5.67	6.36	7.26	7.92	8.58	9.30	10.20	10.92
15 Low	2.64	3.15	3.76	4.20	4.76	5.20	5.60	5.96	6.40	6.72
15 Average	2.92	3.49	4.16	4.68	5.36	5.88	6.36	6.88	7.52	8.00
15 High	3.25	3.88	4.64	5.20	5.96	6.52	7.12	7.72	8.48	9.08
30 Low	1.74	2.10	2.58	2.92	3.38	3.70	4.02	4.34	4.74	5.04
30 Average	1.93	2.34	2.86	3.26	3.78	4.20	4.60	5.02	5.56	5.98
30 High	2.16	2.60	3.18	3.62	4.20	4.68	5.14	5.62	6.28	6.82
60 Low	1.06	1.29	1.62	1.86	2.19	2.44	2.69	2.95	3.28	3.54
60 Average*	1.18	1.43	1.79	2.07	2.46	2.76	3.08	3.40	3.85	4.20
60 High	1.31	1.59	1.99	2.30	2.73	3.08	3.43	3.81	4.35	4.78

1 Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

\* 2012 Indiana Plumbing Code Design Storm

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Average recurrence interval (years)	1	2	5	10	25	50	100	200	500	1000
Probability	100%	50%	20%	10%	4.0%	2.0%	100.0%	0.5%	0.2%	0.1%
<b>Duration (minutes in/hr)</b>										
5 Low	4.2	4.9	5.9	6.6	7.6	8.3	9.0	9.6	10.5	11.1
5 Average	4.6	5.5	6.6	7.4	8.5	9.4	10.2	11.1	12.2	13.2
5 High	5.1	6.1	7.3	8.2	9.5	10.5	11.4	12.5	13.9	15.0
10 Low	3.2	3.9	4.6	5.1	5.8	6.3	6.7	7.2	7.7	8.0
10 Average	3.6	4.3	5.1	5.7	6.5	7.1	7.7	8.3	9.1	9.6
10 High	4.0	4.8	5.7	6.4	7.3	7.9	8.6	9.3	10.2	10.9
15 Low	2.6	3.1	3.8	4.2	4.8	5.2	5.6	6.0	6.4	6.7
15 Average	2.9	3.5	4.2	4.7	5.4	5.9	6.4	6.9	7.5	8.0
15 High	3.3	3.9	4.6	5.2	6.0	6.5	7.1	7.7	8.5	9.1
30 Low	1.7	2.1	2.6	2.9	3.4	3.7	4.0	4.3	4.7	5.0
30 Average	1.9	2.3	2.9	3.3	3.8	4.2	4.6	5.0	5.6	6.0
30 High	2.2	2.6	3.2	3.6	4.2	4.7	5.1	5.6	6.3	6.8
60 Low	1.1	1.3	1.6	1.9	2.2	2.4	2.7	3.0	3.3	3.5
60 Average	1.2	1.4	1.8	2.1	2.5	2.8	3.1	3.4	3.9	4.2
60 High	1.3	1.6	2.0	2.3	2.7	3.1	3.4	3.8	4.4	4.8

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